AUTHOR INDEX

VOLUME 13 (1971)

Adler, I. D., 263 Admiraal, J., 123 Åman, J., 149 Amirkhanian, J. D., 49 Arlett, C. F., 59 Avanzi, S., 225

Bendich, A. J., 199
Beyer, R. D., 283
BHATTACHARJEE, S. B., 115
BOWLES, C. A., 85
BREWEN, J. G., 383
BRIDGES, B. A., 1

CATTANACH, B. M., 371 CONNOR, W. G., 393 CORWIN, H. O., 345 COX, B. S., 297

DE HAAN, P. G., 9 DEKNUDT, GH., 89 DE SERRES, F. J., 276 DONLON, T., 97

EHLING, U. H., 433 EL-METAINY, A., 337 EPSTEIN, S. S., 263

Fahmy, O. G., 19 Fahrig, R., 436 Ficsor, G., 283 Filner, P., 199 Fortuin, J. J. H., 131, 137 Fox, M., 403

GENEROSO, W. M., 171 GENGOZIAN, N., 383 GILLBERG, B. O., 149 GILLIAVOD, N., 274 GOFMAN, J. W., 67

Hoekstra, W. P. M., 9 Hoo, S. S., 85 Huff, S. W., 171 Hunnable, E. G., 297

INNOCENTI, A. M., 225 ISHII, Y., 193 ITO, J., 93 ITO, K., 361 Janca, F. C., 283 Jost, E., 49

KALE, P. G., 233 KAMRA, O. P., 327 KAPLAN, R. W., 185 KIMBALL, R. F., 289 KONDO, S., 193

LEMONTT, J. F., 311, 319 LÉONARD, A., 89, 274 LIFSCHYTZ, E., 35 LINDEN, G., 89 LIU, M., 289 LÜNING, K. G., 77

Malling, H. V., 425 Michaelis, A., 215 Minamori, S., 361 Minkler, J. L., 67 Mittler, S., 287 Mottershead, R., 1 Mukherjee, P., 115 Müller, D., 377 Myrtle, M. J., 19

NICOLOFF, H., 215 NORMAN, A., 97, 393

OBE, G., 421 OBERMOSER, H., 123 ONG, T., 276

PIJNACKER, L. P., 251 PILUSO, D., 67 PONS, F. W., 185 POTTER, J., 59

RAMARAO, G., 263 RIEGER, R., 215 ROE, C. R., 123 RONEN, A., 109

SALTS, Y., 109 SAN, R. H. C., 279 SCHEID, W., 429 SCHULZ, S., 185 SETLOW, J. K., 289 SHERIDAN, W., 77, 163 SMITH, P., 345 SPIZIZEN, J., 93 STICH, H. F., 279 STORM, P. K., 9 STOUT, S. K., 171 STRASSER, F. F., 377

TAKAGI, M., 337 TANDY, R. K., 67 TANO, S., 337 TOKUNAGA, C., 155 TRAUT, H, 429

VERHOEF, C., 9

WILLIAMS, C. E., 371 WÜRGLER, F. E., 353

YAMAGUCHI, H., 337 YOU, K. S., 123

ZIMMER, D. M., 283

SUI

MUTA

VOL

Acri Agii

—, Air-

Alle

Ary

As

Asi

8-1

Ba

Be

В

2

E

5

5

(

NDEX

SUBJECT INDEX

VOLUME 13 (1971)

Acridine orange, effect on recovery of X-irradiated bacteria, 115

Aging, effects of, in Drosophila males, on frequency of XXY and XO progeny, 155

—, of seed, in Triticum durum, 225

Air-drying method, for preparing metaphase chromosomes from spermatogonial cells of rat and mouse, 85

Allele, $recA^+$ -dependent mutagenesis before DNA replication in irradiated $E.\ coli$, I

2-Aminopurine, neighbour effects in mutation of *ochre* triplets in T4rII gene, 109

Aryldialkyltriazenes, in mouse, host-mediated assay, 436

Aspergillus nidulans, control of mitotic intragenic recombination and recovery from UV damage, 131, 137

Asporogenous mutation, following ethyl methanesulphonate treatment in B. subtilis, 93

8-Azaguanine resistance, by γ -radiation in a Chinese hamster cell line, 59

Bacillus subtilis, asporogenous mutation following ethyl methanesulphonate treatment, 93

—, 4-hydroxyaminoquinoline 1-oxide, 4-nitroquinoline 1-oxide and UV-irradiation, 193

Bacterium paracoli, DNA macromutant identified as Flavobacterium, lack of immunologic relationship, 123

Barley, activities of N-alkyl-N'-nitro-N-nitrosoguanidines, 327

—, seeds, dormant, radiation-induced breaks,

2,5-Bis-(ethyleneimino)-p-benzoquinone, in V. faba, 421

Bone marrow, cells, of male rat, trimethylphosphate and TEPA in, 263

 Chinese hamster, treated with phenylbutazone and cyclophosphamide, 377
 Bromodeoxyuridine, effect on recovery of

X-irradiated bacteria, 115

5-Bromouracil, neighbour effects in mutation of *ochre* triplets in T₄rII gene, 109

Carausius morosus, effects of X-rays on different meiotic stages of oocytes, 251

Chromosome, X, of D. melanogaster, recombinational patterns at base of, 35

Culex pipiens, X-rays and 1,3- propanedioldimethanesulphonate, 49 Cyclophosphamide, in Chinese hamster bone marrow, 377

Dark recombination, in yeast, 297 Di-2-chloroethyl-sulphide, at eu- and

heterochromatic loci in D. melanogaster, 19 Diethyl sulphate, in male mice, 89

1,4-Di(methanesulphonoxy)butane, in female mice, 171

Dimethylnitrosamine, interaction with mouse liver microsomes, 425

Diploids, uvs^+/uvs^+ , uvsD/uvsD and uvsE/uvsE, in A. nidulans, mitotic intragenic recombinants from, 137

DNA, exogenous, uptake of, by pea seedlings and tobacco cells, 199

—, replication, in irradiated E. coli, recA⁺dependent mutagenesis before, I

Drosophila melanogaster, effects of temperature and aging on progeny, 155

-, eggs, inseminated, X-irradiation-induced translocations, 353

-, extrachromosomal element delta in, 361

—, males, crossing-over following X-irradiation, 233

—, monosomic-trisomic individuals, by X-irradiation of immature ooxytes, 429

—, mutability at eu- and heterochromatic loci, 19

 recombinational patterns at base of X-chromosome, 35

 , spermatozoa, failure of magnetism to influence production of X-ray-induced recessive lethals, 287

—, temperature shock-induced mutations at dumpy locus, 345

Egg, D. melanogaster, inseminated, X-irradiation-induced translocations, 353

Escherichia coli, genetic recombination, 9

 irradiated, recA⁺-dependent mutagenesis before DNA replication, I

—, neighbour effects in mutation of ochre triplets in T₄rII gene, 109

-, X-irradiated, effect on recovery of mutagenic agents, 115

Ethanol, in V. faba, 215

Ethidium bromide, in male mice, 89

Ethyl-2-chloroethyl-sulphide, at eu- and heterochromatic loci in D. melanogaster, 19

2-Ethyleneimino-5,6,7,8-tetrahydronaphtho-quinone-1,4, in V. faba, 421

SUI

Mag

Mal

Mai

Mei

Mei

Me

Me

Me

N-1

Mic

Mit

Mit

Mo

Mo

Mo

Μι

Ethyl methanesulphonate, in B. subtilis, 93

—, in mouse, female, 171

—, —, male, 89

—, —, in spermatogonia, 371

-, neighbour effects in mutation of ochre triplets in T4rII gene, 109

N-Ethyl-N'-nitro-N-nitrosoguanidine, in barley, 327

-, at eu- and heterochromatic loci in D. melanogaster, 19

Extrachromosomal element, delta, in D. melanogaster, 361

Fibroblast, cultured, human, long-term effect of radiation on chromosomes, 67

Fine-structure analysis, recombinational patterns at base X-chromosome of D. melanogaster, 35

Flavobacterium arborescens, total lack of immunologic relationship of DNA macromutant to, 123

Fractionation, in X-ray treatment of mouse spermatogonia, 163

Gene, T₄rII, neighbour effects in mutation of ochre triplets in, 109

Haemophilus influenzae, exposed to nitrosoguanidine and methyl methanesulphonate, effects of posttreatment, 289

"Half" mustard gas, at eu- and heterochromatic loci in D. melanogaster, 19

Hamster, Chinese, bone marrow, treated with phenylbutazone and cyclophosphamide,

—, γ-radiation, 59

Hordeum distichum, activities of N-alkyl-N'nitro-N-nitrosoguanidines, 327

-, seeds, dormant, radiation-induced breaks, 337

Host-mediated assay, aryldialkyltriazenes in mouse, mitotic gene conversion in S. cerevisiae, 436

-, for detecting mutagens in vivo, streptozotocin in rat testes, 283

Human, fibroblasts, cultured, long-term effect of radiation on chromosomes, 67

-, leucocytes, unscheduled DNA synthesis,

-, lymphocytes, single-strand breaks by ionizing radiation, 97

-, xeroderma pigmentosum cells, exposed to 4-nitroquinoline 1-oxide and 4-hydroxyaminoquinoline 1-oxide, 279

-, X-radiation-induced aberrations, comparison to marmoset leukocyte irradiation, 383

4-Hydroxyaminoquinoline 1-oxide, differential inactivation of transforming DNA by, 193

, in xeroderma pigmentosum cells, 279 Hydroxylamine, neighbour effects in mutation of ochre triplets in T4rII gene, 109

-, in V. faba, 215

ICR-170, in female mice, 171

5-Iodo-2'-deoxyuridine, in lymphoma cells of mice, X-ray-induced resistance to, 403

Irradiation, γ , in Chinese hamster cell line, 59 -, -, and mitomycin C, synergistic effect of, on embryonic litter size reduction in mice,

-, single-strand breaks in dormant barley seeds DNA, 337

—, Co⁶⁰, in chromosomes of cultured human fibroblasts, 67

-, ionizing, in DNA of human lymphocytes,

—, UV, in B. subtilis, 193

-, --, control of recovery from damage in A. nidulans, 131, 137

-, -, followed by dark holding and photoreactivating light, in yeast, 297

-, -, induced c mutations in prophage kappa, 185

-, -, unscheduled DNA synthesis in human leucocytes, 393

-, in xeroderma pigmentosum cells, 279

—, UV and γ , in E. coli, recA+-dependent mutagenesis before DNA replication, 1

--, UV and X, mutability in S. cerevisiae, 311,

-, X, in bacteria, effect on recovery of mutagenic agents, 115

-, -, in Culex pipiens, 49

-, -, in D. melanogaster, 233

—, —, fractionated, in mouse spermatogonia, 163

-, -, of immature oocytes of D. melanogaster, monosomic-trisomic individuals, 429

-, -, induced sex-linked recessive lethals, failure of influence of magnetism, 287

-, -, inducing resistance to 5-iodo-2'-deoxyuridine in lymphoma cells, 403

-, -, in meiotic stages of Carausius morosus oocytes, 251

-, -, in mouse, changes in sex proportion, 77

-, translocations in inseminated D. melanogaster eggs, 353

-, X and γ , human and marmoset leukocytes, 383

-, X and UV, sensitivity in E. coli, 9 Isopropyl methanesulphonate, in female mice,

-, human, and marmoset, X-irradiation, 383 —, —, unscheduled DNA synthesis, 393

Litter size, embryonic, reduction in mice, synergistic effect of mitomycin C and radiation on, 433

Liver, microsomes, mouse, interaction with dimethylnitrosamine, 425

Lymphocytes, human, single-strand breaks by ionizing radiation, 97

, unscheduled DNA synthesis, 393

Lymphoma, cells, of mouse, X-ray-induced resistance to 5-iodo-2'-deoxyuridine in, 403

Macromutant, DNA, identified as Flavobacterium, total lack of immunologic relationship, 123

X

of

e,

an

es,

oa,

an

I,

ia,

er,

y-

sus

77

es,

ce,

83

ith

by

103

Magnetism, failure to influence X-ray-induced sex-linked recessive lethals, 287

Maleic hydrazide, in V. faba, 215

Marmoset, leukocytes, X-irradiation, 383

Meiosis, chromosome rearrangement in, in male mice given chemical mutagens, failure to detect, 89

Meiotic stages, of oocytes of Carausius morosus, effects of X-rays on, 251

Metaphase, chromosomes in, from spermatogonial cells of rat and mouse, an air-drying method for preparing, 85

Method, air-drying, for preparing metaphase chromosomes from spermatogonial cells of rat and mouse, 85

Methyl methanesulphonate, in female mice, 171 -, in H. influenzae, effects of posttreatment, 289

N-Methyl-N'-nitro-N-nitrosoguanidine, in barley, 327

-, in E. coli, 9

-, at eu- and heterochromatic loci in D. melanogaster, 19

—, in female mice, 171

-, in H. influenzae, effects of posttreatment, 280

—, in male mice, 89

, in xeroderma pigmentosum cells, 279

Microsomes, mouse, interaction with dimethylnitrosamine, 425

Mitomycin C, in mouse spermatogonia, 274 -, and radiation, synergistic effect of, on

embryonic litter size reduction in mice, 433 Mitotic intragenic recombination, control in A. nidulans, 131, 137

Monosomic-trisomic individuals, in D. melanogaster, by X-irradiation of immature oocytes, 429

Mosquito, Culex pipiens, X-rays and 1,3propanedioldimethanesulphonate, 49

Mouse, air-drying method for preparing metaphase chromosomes from spermatogonial cells, 85

-, aryldialkyltriazenes, host-mediated assay, 436

-, changes in sex proportion, 77

-, effects of alkylating chemicals on reproductive capacity, 171

-, fractionated X-ray treatment of spermatogonia, 163

-, liver microsomes, interaction with dimethylnitrosamine, 425

-, male, given chemical mutagens, failure to detect meiotic chromosome rearrangement,

--, mitomycin C in spermatogonia, 274

-, spermatogonia, ethyl methanesulphonate and triethylenemelamine, 371

—, synergistic effect of mitomycin C and radiation on embryonic litter size reduction,

-, X-ray-induced resistance to 5-iodo-2'deoxyuridine in lymphoma cells, 403

Mustard gas, at eu- and heterochromatic loci in D. melanogaster, 19

Mutagen, acridine orange, effect on recovery of X-irradiated bacteria, 115

-, 2-aminopurine, neighbour effects in mutation of ochre triplets in T4rII gene, 109

-, aryldialkyltriazenes, in mouse, hostmediated assay, 436

-, 2,5-bis-(ethyleneimino)-p-benzoquinone, in V. faba, 421

-, 5-bromodeoxyuridine, effect on recovery of X-irradiated bacteria, 115

-, 5-bromouracil, neighbour effects in mutation of ochre triplets in T4rII gene, 109

-, cyclophosphamide, in Chinese hamster bone marrow, 377

-, di-2-chloroethyl-sulphide, at eu- and heterochromatic loci in D. melanogaster, 19

-, diethyl sulphate, in male mice, 89 -, 1,4-di(methanesulphonoxy)butane, in female mice, 171

—, dimethylnitrosamine, interaction with mouse liver microsomes, 425

-, ethidium bromide, in male mice, 89

-, ethyl-2-chloroethyl-sulphide, at eu- and heterochromatic loci in D. melanogaster, 19

-, 2-ethyleneimino-5,6,7,8- tetrahydronaphthoquinone-1,4, in V. faba, 421

—, ethyl methanesulphonate, in B. subtilis, 93

-, -, in female mice, 171

-, -, in male mice, 89

-, --, in mouse spermatogonia, 371

—, —, neighbour effects in mutation of ochre

triplets in T₄rII gene, 109
—, N-ethyl-N'-nitro-N-nitrosoguanidine, at eu- and heterochromatic loci in D. melanogaster, 19

-, in higher plants, 327

-, "half" mustard gas, at eu- and heterochromatic loci in D. melanogaster, 19

-, 4-hydroxyaminoquinoline 1-oxide, differential inactivation of transforming DNA by, 193

—, —, in xeroderma pigmentosum cells, 279 --, hydroxylamine, neighbour effects in

mutation of ochre triplets in T4rII gene, 109

-, in V. faba, 215

—, ICR-170, in female mice, 171

-, 5-iodo-2'-deoxyuridine, in lymphoma cells of mice, X-ray-induced resistance to, 403

-, isopropyl methanesulphonate, in female mice, 171

—, maleic hydrazide, in V. faba, 215

—, methyl methanesulphonate, in female mice, 171

-, in H. influenzae, effects of posttreatment, 289

-, N-methyl-N'-nitro-N-nitrosoguanidine, in E. coli, 9

—, —, at eu- and heterochromatic loci in

D. melanogaster, 19 —, —, in female mice, 171

-, -, in higher plants, 327

-, -, in H. influenzae, effects of posttreatment, 289

—, —, in male mice, 89

–, —, in xeroderma pigmentosum cells, 279

SU

Sp

S

T

T

Mutagen, N-methyl-N'-nitro-N-nitrosoguani-dine (continued)

—, mitomycin C, in mouse spermatogonia, 274 —, —, and radiation, synergistic effect of, on

embryonic litter size reduction in mice, 433

—, mustard gas, at eu- and heterochromatic loci in *D. melanogaster*, 19

-, Myleran, in female mice, 171

—, 4-nitroquinoline 1-oxide, in B. subtilis, 193

—, —, in xeroderma pigmentosum cells, 279
 —, nitrous acid, neighbour effects in mutation of *ochre* triplets in T4rII gene, 109

—, optical brighteners, petite mutants in yeast,

 , phenylbutazone, in Chinese hamster bone marrow, 377

 , 1-phenyl-3,3-dimethyltriazene, in mouse, host-mediated assay, 436

-, -, in N. crassa, 276

--, 1-phenyl-3-monomethyltriazene, in N. crassa, 276

--, 1,3-propanedioldimethanesulphonate, in Culex pipiens, 49

-, n-propyl methanesulphonate, in female mice, 171

—, N-propyl-N'-nitro-N-nitrosoguanidine, in barley, 327

—, I-(pyridyl-3)-3,3-dimethyltriazene, in mouse, host-mediated assay, 436

—, I-(pyridyl-3-N-oxide)-3,3-dimethyltriazene, in mouse, host-mediated assay, 436

-, streptozotocin, in rat testes, 283

-, 2,3,5,6-tetra-(ethyleneimino)-p-benzoquinone, in V. faba, 421

—, Trenimon, in V. faba, 421

-, 2,3,5-tri-(ethyleneimino)-p-benzoquinone, in V. faba, 421

—, triethylenemelamine, in female mice, 171

—, —, in mouse spermatogonia, 371

—, trimethylphosphate, in bone marrow cells of male rat, 263

—, Tris[2-methyl-1-aziridinyl]phosphine oxide, in bone marrow cells of male rat, 263

Mutant, M1975, of B. paracoli, lack of immunologic relationship with F. arborescens, 123

-, petite, in yeast by optical brighteners, 149

-, uvsD and uvsE, in A. nidulans, photoreactivation of UV damage, 131

Myleran, in female mice, 171

Neurospora crassa, 1-phenyl-3,3-dimethyltriazene and 1-phenyl-3-monomethyltriazene, 276

4-Nitroquinoline 1-oxide, in B. subtilis, 193
—, in xeroderma pigmentosum cells, 279

Nitrous acid, neighbour effects in mutation of ochre triplets in T₄rII gene, 109

Oocytes, of *Carausius morosus*, effects of X-rays on different meiotic stages of, 251

 immature, of D. melanogaster, X-irradiated, production of monosomic-trisomic individuals, 429 Optical brighteners, petite mutants in yeast, 149

Parthenogenetic stick insect, Carausius morosus, X-irradiation of oocytes, 251

Pea, seedlings, uptake of exogenous DNA by,

Peritoneal cavity, rat, streptozotocin treatment, 283

Phenylbutazone, in Chinese hamster bone marrow, 377

 I-Phenyl-3,3-dimethyltriazene, in mouse, hostmediated assay, 436

--, in N. crassa, 276

1-Phenyl-3-monomethyltriazene, in N. crassa, 276

Photoreactivating light, post-UV effects of, in yeast, 297

Photoreactivation, of UV damage in uvsD and uvsE mutants in A. nidulans, 131

Pisum sativum, seedlings, uptake of exogenous DNA by, 199

Progeny, XXY and XO, of D. melanogaster, effects of temperature and aging on, 155

1,3-Propanedioldimethanesulphonate, in *Culex* pipiens, 49

Prophage kappa, phenotypic delay of expression of UV-induced c mutations, 185

n-Propyl methanesulphonate, in female mice, 171

N-Propyl-N'-nitro-N-nitrosoguanidine, in higher plants, 327

Pseudomonas aeruginosa, DNA, uptake of, by pea seedlings and tobacco cells, 199

I-(Pyridyl-3)-3,3-dimethyltriazene, in mouse, host-mediated assay, 436

I-(Pyridyl-3-N-oxide)-3,3-dimethyltriazene, in mouse, host-mediated assay, 436

Rat, air-drying method for preparing metaphase chromosomes from spermatogonial cells, 85

—, male, trimethylphosphate and TEPA in bone marrow cells, 263

—, testes, streptozotocin treatment, 283

Reproductive capacity, of adult female mice, treated with alkylating chemicals, 171

Saccharomyces cerevisiae, dark recombination, 297

, host-mediated assay, aryldialkyltriazenes in mouse, 436

—, petite mutants induced by optical brighteners, 149

-, UV mutability in, 311, 319

Saguinus fuscicollis, X-irradiation, 383
Salmonella typhimurium, indicator organism
for interaction of dimethylnitrosamine
with mouse liver microsomes, 425

—, organ-specific host-mediated microbial assay for detecting chemical mutagens in vivo, 283

Seedling, pea, uptake of exogenous DNA by, 199

Seed, aging, and chromosome breakage, in Triticum durum, 225

EX

ast,

by,

ent,

ost-

issa,

f, in

and

nous

ster.

155

ulex

ores-

nice,

f, by

ouse,

e, in

netaonial

A in

mice,

ation,

zenes

anism e

al agens

in

y, 199

Serratia marcescens, phenotypic delay of expression of UV-induced c mutations in prophage kappa, 185

 proportion, changes in, unacceptable way to estimate sex-linked recessive lethals by,

"Silent" repair, genetic control of dark recombination in yeast, 297

Spermatogonia, cells, of rat and mouse, an airdrying method for preparing metaphase chromosomes from, 85

—, mouse, effects of mitomycin C, 274

--, --, ethyl methanesulphonate and triethylenemelamine, 371

—, —, fractionated X-ray treatment, 163 Spermatozoa, failure of magnetism to influence production of X-ray-induced recessive lethals, 287

Streptozotocin, in rat testes, 283

Temperature, effects of, in Drosophila males, on frequency of XXY and XO progeny, 155 Temperature shock, inducing specific visible mutations at dumpy locus of

D. melanogaster, 345
Testes, rat, streptozotocin treatment, 283
2,3,5,6-Tetra-(ethyleneimino)-p-benzoquinone, in V faba, 421

Tobacco, cells, uptake of exogenous DNA by, 199

Trenimon, in V. faba, 421

2,3,5-Tri-(ethyleneimino)-p-benzoquinone, in V. faba, 421

Triethylenemelamine, in female mice, 171

-, in mouse spermatogonia, 371

Trimethylphosphate, in bone marrow cells of male rat, 263

Triplet, ochre, in T4rII gene, neighbour effects in mutation of, 109

Tris[2-methyl-1-aziridinyl]phosphine oxide, in bone marrow cells of male rat, 263

Triticum durum, seed aging and chromosome breakage, 225

Vicia faba, action of ethyleneimines on chromosomes, 421

-, hydroxylamine in, 215

Xeroderma pigmentosum, cells, exposed to 4-nitroquinoline 1-oxide and 4-hydroxyaminoquinoline 1-oxide, 279

Yeast, dark recombination, 297

—, petite mutants induced by optical brighteners, 149

-, UV mutability in, 311, 319